

# Human SDF1 protein, His tag (active)

**Cat. No. GTX00098-pro**

<b>Application</b>	Functional Assay
<b>Species</b>	Human

**Package**  
10 µg

## APPLICATION

### Application Note

SDF1 (stromal cell-derived factor 1), also known as C-X-C motif chemokine 12, is a chemokine protein that has chemotaxis active on T-lymphocytes and monocytes. It is thought that SDF1 stimulates migration of monocytes and T-lymphocytes through its receptors, CXCR4 and ACKR3; thus, chemotaxis assay used 24-well microchemotaxis system was undertaken to detect the chemotactic effect of SDF1 on the human monocytic cell line THP-1. Briefly, THP-1 cells were seeded into the upper chambers (100 µl cell suspension,  $1 \times 10^6$  cells/ml in RPMI-1640 with 0.5% FBS) and SDF1 (10 ng/ml, 30 ng/ml and 60 ng/ml diluted separately in serum free RPMI-1640) was added in lower chamber with a polycarbonate filter (8µm pore size) used to separate the two compartments. After incubation at 37°C with 5% CO<sub>2</sub> for 3h, the filter was removed, then cells in low chamber were observed by inverted microscope at low magnification ( $\times 100$ ) and the number of migrated cells were counted at high magnification ( $\times 400$ ) randomly (five fields for each filter). The migrated THP-1 cells in low chamber at low magnification ( $\times 100$ ) randomly, and the migrated cells were counted at high magnification ( $\times 400$ ). SDF1 is able to induce migration of THP-1 cells, and the optimum chemotaxis of SDF1 occurs at 10-60 ng/ml.

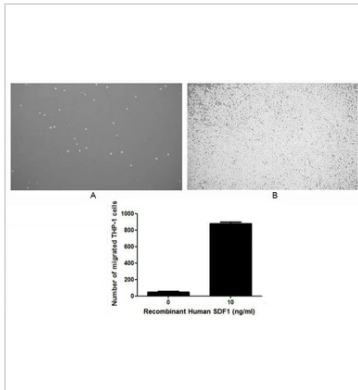
**Observed MW** 9 kDa.

## PROPERTIES

<b>Form</b>	Lyophilized powder
<b>Buffer</b>	Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose.
<b>Preservative</b>	ProClin 300
<b>Storage</b>	For short-term storage (1-2 weeks), store at 4°C. For long-term storage, store at -20°C or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.
<b>Region/Sequence</b>	N-terminal His-Tag; Pro23~Lys89 (NP_000600.1)
<b>Expression System</b>	E. coli
<b>Purity</b>	> 95%
<b>Endotoxin</b>	< 1 EU/µg
<b>Conjugation</b>	Unconjugated
<b>Note</b>	For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.



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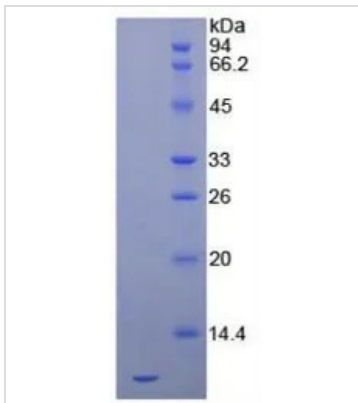
**DATA IMAGES**

**GTx00098-pro Functional Assay Image**

The chemotactic effect of GTx00098-pro Human SDF1 protein (active).

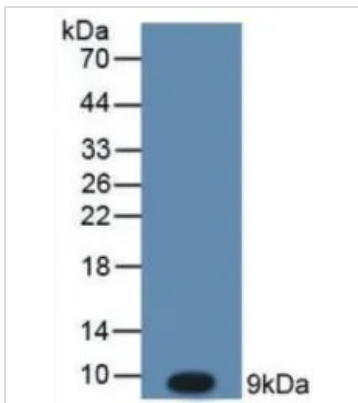
Upper: (A) THP-1 cells were seeded into the upper chambers and serum free RPMI-1640 without SDF1 was added in lower chamber, then cells in lower chamber were observed at low magnification ( $\times 100$ ) after incubation for 3hrs.

(B) THP-1 cells were seeded into the upper chambers and serum free RPMI-1640 with 10 ng/ml SDF1 was added in lower chamber, then cells in lower chamber were observed at low magnification ( $\times 100$ ) after incubation for 3hrs.

Lower: The number of migrated cells were counted at high magnification ( $\times 400$ ) randomly (five fields for each filter).


**GTx00098-pro Image**

SDS-PAGE analysis of GTx00098-pro Human SDF1 protein (active).


**GTx00098-pro Image**

WB analysis of GTx00098-pro Human SDF1 protein (active).



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